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ABSTRACT

This paper reviews the literature on the relationship between birth order and several variables, especially academic achievement. One study found a relationship between leadership skills and birth order for males. Several studies found no relationship between birth order and academic achievement; grade point average; self-esteem; locus of control scores; and scores on the Developmental Indicators for the Assessment of Learning-Revised test. Some of the studies did find relationships between academic achievement and variables other than birth order, such as parents' educational level. Two studies determined that first-born children received more parental interaction and more affectionate and caretaking behaviors from their mothers than did other children. Other studies indicated that first-born children: (1) had higher academic achievement after a relocation; (2) had higher grade point averages; (3) made up a larger proportion of the college population; and (4) scored higher on standardized tests of verbal aptitude. It is concluded that there is a relationship between birth order and academic achievement. Spacing children's ages can offset the advantage of the first-born. Parental interaction with a child and the parents' educational background influence the child's academic achievement. An 18-item bibliography is provided. (BC)

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"THE RELATIONSHIP BETWEEN BIRTH ORDER AND ACADEMIC ACHIEVEMENT"

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Since the mid 1800's, many studies have been done on the relationship between birth order and achievement. Educators, researches, psychologist, and the general public are concerned with what effects achievement. Is it possible to determine the probable academic success of a student based on his/her birth order? Does the first born have an advantage? If so, what role does age spacing play on this advantage? Any finding that could help determine who is less advantaged and why would greatly benefit teacher planning. It could also help contribute to the family planning process. Parents need to be aware of the factors that help to shape their child's intellectual enviornment.

Does birth order effect academic achievement? According to Powell (1985) there is no significant relationship between birth order and academic performance. However, this study shows that leadership skills were related to birth order for males. Furthermore, this study showed a positive relationship between birth order and social skills.

Gailbraith and Smith (1975) found that there was no relationship between birth order and academic achievement. They criticized Zajonc's(1986) findings for this relationship because of inconsistencies between child spacing and intelligence.

While much attention is focused on the first born, Edwards

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and Thacker's (1979) results supplies little support that the first born or any other birth order significantly affected grade point average. For the 326 college students that they studied, birth order nor sibling gender had a significant affect on GPA.

In another investigation, ten middle children and their families were studied from four Los Angeles schools. After home interviews, exploratory field methods, observations, and questionairres Fox (1985) found that birth order as an isolated entity had no affect on the self-esteem of middle child, and it did not affect academic achievement. The study also found that life event/crises were not factors in and of themselves that affected academic achievement, and self esteem of these children.

One study Waldman (1988) investigated 79 prelingual severely to profoundly hearing impaired adolescants with hearing parents. These students were 13-19 years old and had IQ's within normal limits. The study concluded that birth order was not significantly related to locus of control score. She found that for male participants, IQ scores were related to age differences between them and thier sisters. In addition for females, college aspirations were related to sibling gender and age spacing. Female subjects who had youger brothers or much younger sisters had the highest college aspirations.

Whitney (1989) studied 345 students in Loveland Colorado. Her study found no significant relationship between the Dial-RC (Developmental Indicators for the Assessment of

Learning-Revised) subtest and total tests and birth order.

Both Svanum and Bringle (1980) and Walther (1988) found no significance in the relationship between birth order achievement. It is worth noting,however, that the Walther (1988) study showed that the educational level of both the father and the mother were related to the child's academic achievements. Furthermore, higher achievement scores were associated with parents having higher educational levels. She went on to say that higher interaction between father and child related to higher academic achievement scores.

Many other studies have shown how parental interaction affects achievement with regards to birth order. Howard, Johnson, and Streissguth (1977) stated that birth order effects were in the predicted direction of the firstborn recieving much more parental interaction in every major category. There were more periods of verbal interacton, caretaking, play periods and any interactions such as looking at infants for the first born. Sex, birth order, and social class differences were observed in this study of 32 two week old infants. These findings were consistent with birth order and social class differences reported in the enviornment of older infants and children. They found that the first born will excel because of the first born advantage.

Previously, Jacobs and Moss (1976) had similar findings. They felt that mothers had more social, affectionate, and caretaking behaviors (except for feeding activities) with their first borns than their second born. However, there were

particular aspects of maternal behaviors that appeared to be stable from one sibling to the other. Some types of interaction between mother and their younger infants were related to attention seeking behaviors in the first born male and female siblings.

One study Hothe (1985) investigated the relationship between self concept, partner support and academic achievement in 93 adult female students. These students were selected from 16 social science classes at Fayettville Technical Institute in Fayettville, North Carolina. Each woman had a spouse, fiance, or boyfriend. This study concluded that there was a significant relationship between academic achievement and type of curriculum, birth order, and other variables such as past academic achievement, children in the home, age, race, marital staus and military staus of partners.

Ogletree (1980) stated that first born children have higher academic achievement scores than later-born children. He went on to say that the first born have a greater striving to achieve in school primarily because of the influences of parental aspirations and pressures. A large enough age gap between sibilngs can deter the first born advantage in achievement.

How does family structure and relocation affect the relationship between birth order and achievement? After relocating, what happens to the student's academic performance? For his study Fox (1989) used an intensive case study design to examine the postrelocation academic achievement

and adjustment of 14 eighth graders. Parents, students, and teachers were interviewed during the first and fifth week following relocation and application in a new school. Students who were first born and those living with two biological or step parents earned higher academic achievement after relocation than their counterparts from other family structures.

In addition to finding that the first born have higher academic achievements, some studies show that achievement decreases with family size.

In Nommay's (1988) study, 45 papers published from 1973-1986 were annotated. He concluded that educational achievement decreased as family size increased and that the age of the individual affected birth order results. Family enviornment appeared to have a greater impact on verbal than non-verbal scores. Furthermore, he found that the sex of the sibling had an impact on the tutoring effect with females receiving the greatest benefits. Nommay also found that parent's education, encouragement, and income contributed to the cognitive development of their children. It was further recommended that educators keep informed of future research to understand the family's impact on a student's mental development.

Further research finds that the first born excels in all levels of education-grammar, high school, college and graduate levels. White Hicks (1980) reports that first born children tend to excel in academics when compared with those who were born later on. Firstborns scored higher on a variety of

measures of ability and achievement. There were more first borns present at the college level, and an overrepresentation at the medical and graduate schools. She also stated that when compared with younger brothers and sisters, first borns earned higher grade point averages.

Linhert (1979) states that first borns have higher IQ's and achievement than middle or last born. He felt that the last borns stayed in school longer than the middle born, but they have no IQ advantage.

Altus (1965) agrees that there are more first born in college. This was based on data collected on 1878 students entering college at the University of California 1960-1961. Only representatives of two-child, three-child, and four child families were examined. Between the years of 1960-1961 eighty percent of the student body fell into this group. Since only 6 percent of the student body came from families of five or more children they were excluded from this study. After collecting data on ordinal position, (MAT) Mathematics Aptitude Test and (SAT) Scholastic Aptitude Test he reached another conclusion. He found that first borns may be verbally more able than later borns, but there is no difference where mathematical aptitude is concerned. Also, he found that verbal aptitude was much more significant, of the average college student, than mathematic aptitude. It was the first born in the four-child family who had the highest verbal aptitude mean score for both sexes while the lowest rank went to the third (or youngest) of the three-child family. It was the first born who were

overrepresented among the eminent, the gifted, as well as the college student. In addition, he states that the first born seem to have a greater advantage in the competition for power and place in our society.

The research evidence strongly suggests that there is a relationship between birth order and achievement. That the first born will attain greater achievement than the middle or last born. Furthermore, age spacing of a child can offset the first born advantage. In addition, there is evidence that parental interaction with a child will have a great impact on their future academic achievements. Also, the income of parent's and their educational background are factors influencing the academic achievement of a student.

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